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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/380,187	11/09/1999	RYOJI YAMAGUCHI	01489/P-1730	2304

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EXAMINER

FLETCHER, JAMES A

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 04/06/2004

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/380,187

Applicant(s)

YAMAGUCHI ET AL.

Examiner

James A. Fletcher

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. In re page 17 of the applicant's remarks, applicant's representative states, "the Notice of Acceptance of Application under 35 U.S.C. § 371 and 37 C.F.R. § 1.494 or 1.495 dated November 24 1999 indicates that the priority document has been received by the USPTO. The examiner notes that the copies of the priority documents contain no certification.
2. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 11 is objected to because of the following informalities: It is identical in wording and dependency with claim 10, other than the absence of a comma. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujinami et al (5,568,274).

Regarding claim 1, Fujinami et al disclose a coded signal reproduction apparatus comprising:

- matching status information output means for detecting the matching status of a code (Col 3, lines 17-22 "The control circuit 21 in the separation circuit 21 successively connects the input terminal G of the switching circuit 23 to the output terminals H1 and H2 in accordance with the stream_ID of the packet header received from the header separation circuit 22") which is input for every predetermined bit with a prefix code of a packet start codes (Col 2, lines 1-2 "Each packet includes a header which includes a Packet_Start_Code_Prefix"), and outputting matching status information of a head part of the packet start code (Col 3, lines 17-22 "The control circuit 21 in the separation circuit 21 successively connects the input terminal G of the switching circuit 23 to the output terminals H1 and H2 in accordance with the stream_ID of the packet header received from the header separation circuit 22"); and
- data format means for outputting predetermined data in accordance with the matching status information (Col 3, lines 17-22 "The control circuit 21 in the separation circuit 21 successively connects the input terminal G of the switching circuit 23 to the output terminals H1 and H2 in accordance with the stream_ID of the packet header received from the header separation circuit 22").

Regarding claims 2 and 3, Fujinami et al disclose a coded signal reproduction apparatus wherein the matching status information output means includes:

- a head code detection unit for detecting the matching status of the head part of the packet start code at every predetermined bit from the input code sequence, and outputting matching information at the present point of time (Col 3, lines 7-9 "The multiplexed signal...is reproduced and decoded by the reproducing apparatus" and lines 12-15 "The header separation circuit 22 supplies the headers to the control circuit 24, and supplies the multiplexed signal to the input terminal G of the switching circuit 23"); and
- a matching status historical information hold unit for receiving the matching information at the present point of time, and holding historical information of the matching status of the head code (Col 15, lines 22-24 "The control circuit 24 supplies each entry point it receives from the header separation circuit 22 to the entry point storage device 41, where it is stored"); and
- start code discrimination means for discriminating the packet start code by using the historical information (Col 15, lines 24-28 "Since the current read position is supplied from the drive apparatus 10 to the control circuit 24, the control circuit 24 can store the position and the contents of each entry point in a corresponding relationship to each other") and a packet start code identifier existing in the later half part of the packet start code (Fig 3 shows a packet header ID following a packet start code prefix).

Regarding claims 10-13, Fujinami et al disclose a coded signal reproduction apparatus wherein the input code sequence is a coded and multiplexed signal in which audio, video, and reproduction information annexed thereto are multiplexed (Fig 13

shows audio and video signals multiplexed into a data stream, and Fig 14 shows several reproduction information data in the same stream).

6. Claims 8 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Movshovich et al (6,434,146).

Regarding claim 8, Movshovich et al disclose a coded signal reproduction apparatus comprising:

- end code sequence detection means for detecting, from code sequences of coded data, a code sequence indicating the end of the coded data (Col 10, lines 51-53 "An output enable signal shown on line 414 enables the FIFO 412 to be read until the end of the transport packet is reached." In order for the end of the transport packet to be sensed, a code identifying the end of the packet must clearly be present.); and
- formatter means for adding a predetermined number of pseudo data to the rear of the code sequence indicating the end of the coded data so that the data bus width of pipeline transfer including the end of the coded data becomes equal to the bus width of pipeline transfer including other data, when a code sequence indicating the end of the code data is detected by the end code sequence detection means (Col 10, lines 58-63 "The local header serves a variety of purposes, including...padding the packets to align bytes to the memory controller's natural boundary [burst transfer]").

Regarding claim 18, Movshovich et al disclose a coded signal reproduction apparatus wherein the input code sequence is a coded and multiplexed signal in which

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audio, video, and reproduction information annexed thereto are multiplexed (Col 2, lines 14-19 "Typically, video and audio data are encoded at respective video and audio encoders, and the resulting encoded video and audio data is input to an MPEG-2 Systems encoder/multiplexer. This Systems multiplexer can also receive other inputs, such as control and management information, private data bitstreams, and time stamp information").

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4, 6-7, 14, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujinami et al as applied to claims above, and further in view of Boden (5.633,686).

Regarding claim 4, Fujinami et al disclose a coded signal reproduction apparatus wherein the matching status information output means includes:

- a head code detection unit for detecting the matching status of the head part of the packet start code at every predetermined bit from the input code sequence, and outputting matching information at the present point of time (Col 3, lines 7-9 "The multiplexed signal...is reproduced and decoded by the reproducing apparatus" and lines 12-15 "The header separation circuit 22

supplies the headers to the control circuit 24, and supplies the multiplexed signal to the input terminal G of the switching circuit 23"); and

- a matching status historical information hold unit for receiving the matching information at the present point of time, and holding historical information of the matching status of the head code (Col 3, lines 17-22 "The control circuit 24 in the separation circuit 21 successively connects the input terminal G of the switching circuit 23 to the output terminals H1 and H2 in accordance with the stream_ID of the packet header received from the header separation circuit 22." In order for a full packet to be steered to the appropriate decoder, the header information must be stored in the control of the switching circuit.)

Fujinami et al do not specifically disclose a start code discrimination unit for discriminating a hierarchy start code of video data in accordance with the historical information and a video hierarchy identifier of coded video data which exists in a position corresponding to the latter half of the packet start code.

Boden teaches a start code discrimination unit for discriminating a hierarchy start code of video data in accordance with the historical information (Col 7, lines 10-23 "the controller starts writing the video information to the memory array...until the maximum programmed address is reached...The write bank controller selects the next bank of memory into which data is to be written") and a video hierarchy identifier of coded video data which exists in a position corresponding to the latter half of the packet start code (Col 8, lines 12-13 "the decoder awaits reception of the thirty-two bit start code" and Col 8, lines 18 -19

"Following the start code, the next two bytes received are the system data and system control bytes").

As taught by Boden, basing a code hierarchy on historical information is a useful and easily used technique of gathering the data required for generating the hierarch, and placing such additional data towards the end of the data area used for such information does not require the rearrangement of existing data..

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fujinami et al in order to base hierarchy data on historical information, and to place that data in the second half of the area in which it logically belongs.

Regarding claim 6, Fujinami et al disclose a coded signal apparatus wherein the header analysis means includes a header analysis unit for analyzing the header of the packet and outputting the reproduction information (Fig 17, item 67, "Control Circuit"), and a reproduction information hold unit for holding the reproduction information (Fig 17, item 93 "Entry Point Storage Device" and item 68 "TOC Storage Device").

Regarding claim 7, Fujinami et al disclose a coded signal reproduction apparatus wherein the header analysis means is activated when the start code is identified (Col 12, lines 20-21 "The pack begins with a Pack_Header consisting of a Pack_Start_Code" and Col 3, lines 17-22 "The control circuit 21 in the separation circuit 21 successively connects the input terminal G of the switching circuit 23 to the output terminals H1 and H2 in accordance with the stream_ID of the packet header received from the header separation circuit 22").

Regarding claims 14, 16, and 17, Fujinami et al disclose a coded signal reproduction apparatus wherein the input code sequence is a coded and multiplexed signal in which audio, video, and reproduction information annexed thereto are multiplexed (Fig 13 shows audio and video signals multiplexed into a data stream, and Fig 14 shows several reproduction information data in the same stream).

9. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujinami et al as applied to claims above, and further in view of Movshovich et al.

Regarding claim 5, Fujinami et al disclose a coded signal reproduction apparatus comprising:

- header analysis means for analyzing the header of the packet to output reproduction information when the input code sequence is coded video data (Col 3, lines 12-15 "The header separation circuit 22 supplies the headers to the control circuit 24, and supplies the multiplexed signal to the input terminal G of the switching circuit 23").

Fujinami et al are silent on the topic of effectiveness of the data.

Movshovich et al teach a data format means that inserts the reproduction information together with information indicating effectiveness of the reproduction information, in a predetermined position in the decoded video data (Col 8, lines 32-33 "where bit 15 is binary 0, it indicates an invalid PID whether it is a PCR packet or not.").

As taught by Movshovich et al, effectiveness data lessens the burden on the processor by identifying packets that need not be decoded.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fujinami et al in order to provide effectiveness data to the decoder.

Regarding claim 15, Fujinami et al disclose a coded signal reproduction apparatus wherein the input code sequence is a coded and multiplexed signal in which audio, video, and reproduction information annexed thereto are multiplexed (Fig 13 shows audio and video signals multiplexed into a data stream, and Fig 14 shows several reproduction information data in the same stream).

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Movshovich et al.

Regarding claim 9, Movshovich et al disclose a coded signal reproduction apparatus comprising:

- specific code sequence inserting means for inserting a specific code sequence before decoding;
- wherein the formatter means adds a predetermined number of pseudo data to the rear of the specific code sequence (Col 10, lines 58-63 "The local header serves a variety of purposes, including...padding the packets to align bytes to the memory controller's natural boundary [burst transfer]").

Movshovich do not specifically disclose that the code sequence is inserted in the last packet in a packet sequence. The examiner takes official notice that the location of an inserted code sequence following usable data is a notoriously

well known and widely used technique of adding data to pad a sequence in order to fit the hardware and software environment of a data stream.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to locate the specific codes at the end of the sequence.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Fletcher whose telephone number is (703) 305-3464. The examiner can normally be reached on 7:45AM - 5:45PM M-Th, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached at (703) 308-9644.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, DC 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only).

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

JAF
April 2, 2004


VINCENT BOCCIO
PRIMARY EXAMINER